



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Herr, Daniel Joseph Christian

Group Art Unit: 2811

Serial Number: 10/604,747

Examiner: Unassigned

Filed: August 14, 2003


For: DETERMINISTICALLY DOPED FIELD-EFFECT
DEVICES AND METHODS OF MAKING SAME

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT
UNDER 37 C.F.R. § 1.56 AND 37 C.F.R. § 1.97**

It is respectfully requested that the document listed on the attached Form PTO/SB/08A be considered by the Patent and Trademark Office in the above-referenced application and made of record therein. A full text copy of the relevant documents are enclosed. This information disclosure statement submitted herewith is being filed within three months of the filing date of the application or date of entry into the national stage of an international application or before the mailing date of a first Office action on the merits, whichever event occurs last.

Respectfully submitted,

By: 

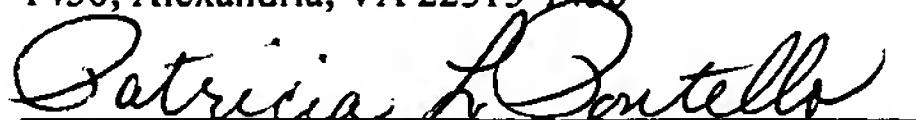
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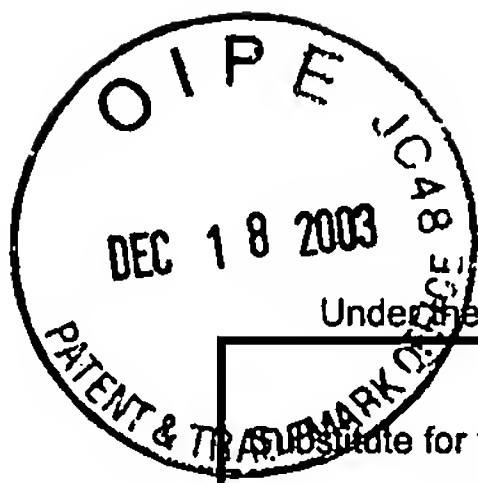
December 16, 2003

Date

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the US Postal Service as first class mail on December 16, 2003, in an envelope addressed to Commissioner of Patents, PO Box 1450, Alexandria, VA 22313-1450


Patricia L. Pontello



INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Complete if Known	
		Application Number	10/604,747
		Filing Date	August 14, 2003
		First Named Inventor	Herr, Daniel J seph Christian
		Art Unit	
Sheet 1 of		Examiner Name	
		Attorney Docket Number	361007-000025

U.S. PATENT DOCUMENTS						
Examiner Initials ¹	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)				
	AA	5,787,253		7/28/98	McCreery et al.	
	AB	6,068,698		5/30/00	Schmidt	
	AY	5,981,316		11/09/99	Yamada et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials'	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
	AC	99/13511	3-18-99	Schmidt		
	AD	0,781,727	2-7-97	NEC Corp.		

NON PATENT LITERATURE DOCUMENTS		
Exam iner Initial	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	AE	D. M. Eigler et al., "Positioning single atoms with a scanning tunnelling microscope", <i>Nature</i> , Vol. 344 (April 1990) pp 524-526.
	AF	P. Bedrossian et al., "Demonstration of the tunnel-diode effect on an atomic", scale, <i>Nature</i> , Vol. 342 (November 1989) pp 258-260.
	AG	Nishi Y. ET AL., <i>Handbook of Semiconductor Manufacturing Technology</i> , Marcel Dekker, Inc. New York, NY (2000).
	AH	Frank, D. et al., "Device Scaling Limits of SiMOSFETs and Their Application Dependencies," <i>Proceedings of the IEEE</i> , Vol. 89, No. 3, (March 2001).
	AI	Gross, W. et al., "Ultrasmall MOSFETs: The Importance of the full Coulomb Interaction on Device Characteristics," <i>IEEE Transactions on Electron Devices</i> , Vol. 47, No. 10, (October 2000).
	AJ	Clark, A., "Russian Technology Waves Goodbye to Strained Silicon," <i>EE Times</i> , (April 8, 2002).

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet

2

of

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C mplete if Known

Application Number

10/604,747

Filing Date

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First Named Inventor

Herr, Daniel Joseph Christian

Art Unit

Examiner Name

Attorney Docket Number

361007-000025

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	AK	Feynman, R.P., Infinitesimal Machinery, <i>Journal of MicroMechanical Systems</i> , Vol. 2, No. 1, March 1993, pp. 4-14.	
	AL	Feynman, R.P., "There's Plenty of Room at the Bottom", <i>Engineering and Science</i> , Vol. 23, 1960, pp. 22-36, Reprinted in Anthony J.G. Hey (Ed.), <i>Feynman and Computation: Exploring the Limits of Computers</i> , Perseus Books, 1999.	
	AM	Giro, et al., "Single Layer Electroluminescent Devices Based on Molecularly Doped Polymer", (MDP) Films, <i>Synthetic Metals</i> , Vol. 84, 1997, pp. 379-80.	
	AN	Johnson, et al., "Electroluminescence From Single Layer Molecularly Doped Polymer Films", <i>SPIE</i> , Vol. 1910, 1993, pp. 6-14.	
	AO	Metzger, R.M., "Electrical Rectification by a Molecule: The Advent of Unimolecular Electronic Devices", <i>Accounts of Chemical Research</i> , Vol. 32, No. 11, 1999, pp. 950-7.	
	AP	Nikzad, et al., "Direct Detection and Imaging of Low-Energy Electrons With Delta-Doped Charge-Coupled Devices", <i>Applied Physics Letters</i> , Vol. 73, No. 23, December 7, 1998, pp. 3417-9.	
	AQ	Stormer, et al., "GaAs Field-Effect Transistor With An Atomically Precise Ultrashort Gate", <i>Appl. Phys. Lett.</i> , Vol. 59, No. 9, August 26, 1991, pp. 1111-3.	
	AR	Tucker, et al., "Prospects for Atomically Ordered Device Structures Based on STM Lithography", <i>Solid-State Electronics</i> , Vol. 42, No. 7-8, 1998, pp. 1061-7.	
	AS	Zaknounge, et al., "High-Power V-Band Ga _{0.51} In _{0.49} P/In _{0.2} Ga _{0.8} As Pseudomorphic HEMT Grown by Gas Source Molecular Beam Epitaxy", <i>IEEE Microwave and Guided Wave Letters</i> , Vol. 9, No. 1, January 1999, pp. 28-30.	
	AT	Saito, S. et al., "Electronic Structure of Si ₂₀ and C ₂₀ Fullerides," <i>Proceedings of the Symposium on Recent Advances in the Chemistry and Physics of Fullerenes and Related Materials</i> , Vol. 3, pp. 457-461, 1996.	
	AU	Cavin, R. et al., "Semiconductor research needs in the nanoscale physical sciences: a Semiconductor Research Corporation working paper," <i>Journal of Nanoparticle Research</i> 2; pp. 213-235; 2000.	
	AV	Ozin, Geoffrey A.; "Nanochemistry: Synthesis in Diminishing Dimensions," <i>Advanced Materials</i> 4, No. 10; pp.612-649; 1992.	
	AW	Desiraju, G.R. (Ed.), "Thoughts on Crystals as Supramolecules", <i>The Crystal as a Supermolecular Entity</i> , John Wiley and Sons Ltd., 1996.	
	AX	Zhirnov et al., "On Designing Sub-70-nm Semiconductor Materials and Processes," <i>IEEE Transactions on Semiconductor Manufacturing</i> , Vol. 15, No. 2 (May 2002).	

Examiner
SignatureDate
Considered